

Detailed Description Text - DETX (69):

2) Using current reference binding mechanism. The SID file can include undefined references and binding information as described in another file as "Esa" definitions corresponding to undefined references in SIDL. Binding is realized, for example, by concatenating the SID file and the bind information to create a complete SID;

Detailed Description Text - DETX (73):

For certain applications, an SI may have fields that cannot be fully bound at render-time. For example, consider a document where each page is an SI containing six identical child objects that are to be bound at render-time, e.g., a real estate listing where each child object corresponds to a house for sale. Consider that the document is to display a total of nine houses. This would require two document pages, but only three of the child objects will be required on the second page. The SI renderer can operate in three models, although others may be possible: 1) fail with an unbound error; 2) ignore unbound objects, treat incomplete IPOs as non-operations; and 3) render only the pasteboard of unbound objects, treat incomplete IPOs as non-operations.

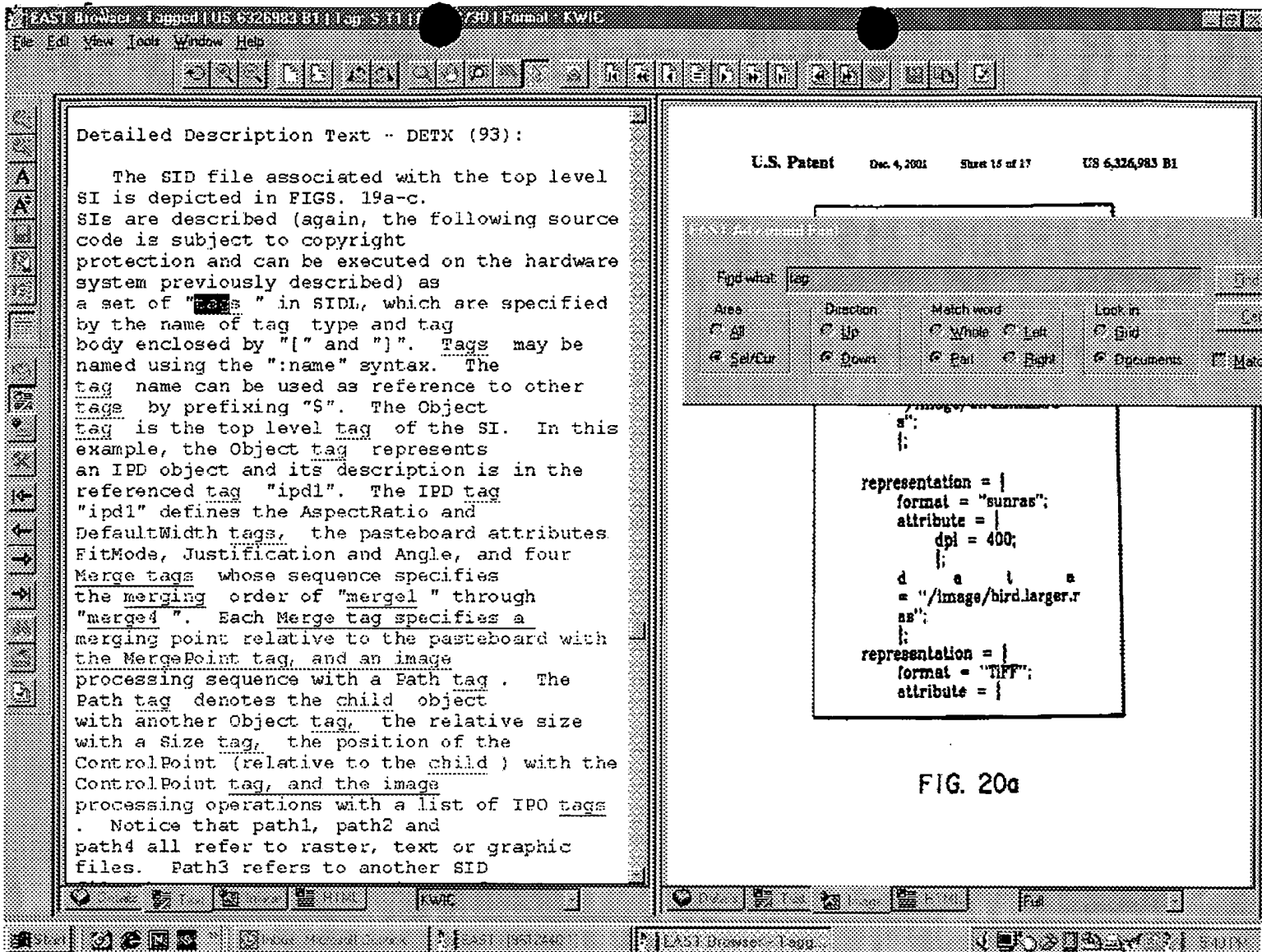
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Find what: leg

Area	Direction	Match word	Look in
<input type="radio"/> All	<input type="radio"/> Up	<input type="radio"/> Whole	<input type="radio"/> Left
<input checked="" type="radio"/> Sel/Cur	<input type="radio"/> Down	<input type="radio"/> Part	<input type="radio"/> Right
			<input type="radio"/> Grid
			<input type="radio"/> Diagram

```
{
  "data": {
    "format": "sunras",
    "attribute": {
      "dpi": 400,
      "d": {
        "a": {
          "l": {
            "a": {
              "format": "TIFF",
              "attribute": {}
            }
          }
        }
      }
    }
  }
}
```

FIG. 20a



Detailed Description Text - DETX (93):

The SID file associated with the top level SI is depicted in FIGS. 19a-c. SIs are described (again, the following source code is subject to copyright protection and can be executed on the hardware system previously described) as a set of "tags" in SIDL, which are specified by the name of tag type and tag body enclosed by "[" and "]". Tags may be named using the ":name" syntax. The tag name can be used as reference to other tags by prefixing "\$". The Object tag is the top level tag of the SI. In this example, the Object tag represents an IPD object and its description is in the referenced tag "ipd1". The IPD tag "ipd1" defines the AspectRatio and DefaultWidth tags, the pasteboard attributes FitMode, Justification and Angle, and four Merge tags whose sequence specifies the merging order of "merge1" through "merge4". Each Merge tag specifies a merging point relative to the pasteboard with the MergePoint tag, and an image processing sequence with a Path tag. The Path tag denotes the child object with another Object tag, the relative size with a Size tag, the position of the ControlPoint (relative to the child) with the ControlPoint tag, and the image processing operations with a list of IPO tags. Notice that path1, path2 and path4 all refer to raster, text or graphic files. Path3 refers to another SID

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Find what: tag

Area

☐ All

☒ Sel/Cur

Direction

☐ Up

☒ Down

Match word

☐ Whole

☐ Left

☒ Part

☐ Right

Look in

☐ Find

☒ Documents

☐ Match

```
s";  
|;  
  
representation = |  
  format = "sunras";  
  attribute = |  
    dpi = 400;  
    |;  
    d   a   l   a  
  = "/image/bird.larger.r  
  as";  
  |;  
representation = |  
  format = "TIFF";  
  attribute = |
```

FIG. 20a

The FixedPoint parameter allows the application of spatial transformations around a point of reference. For example, specifying a FixedPoint allows the user to rotate the object around the FixedPoint instead of rotating around the center of the object. In general, any supported spatial transformation can be defined to operate around FixedPoint. Since the FixedPoint is a parameter to ControlTransform and is not part of the pasteboard, the IPO adjusts the ControlPoint automatically to ensure that the child object is merged into the parent pasteboard at the correct position. An example of how the ControlPoint is adjusted is described below.

For example (see FIGS. 21a-b), the object has a ControlPoint C of (0.5,0.5) and a fixed point of (2.0,0.0) relative to upper left corner P of the child. Suppose the rendering indicates the child is of size 50.times.50. The FixedPoint F is (-100,0) relative to the child. The ControlPoint is initially (25,25) relative to P, and (125,25) relative to the FixedPoint. Rotating the child 45.degree. about the FixedPoint will generate a child with a new size of 71.times.71 (bounding box) with an origin at (71,107) relative to the

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100

Find what	Copy
<input type="text"/>	<input type="text"/>

Direction

Match word

Look in

2



2515

100



2

1997

1999

```
representation = |
    format = "sunras";
    attribute = |
        dpi = 400;
    |;
    d      a      l      n
    = "/image/bird.larger.r
    as";
    |;
representation = |
    format = "tiff";
    attribute = |
```

FIG. 20a

Σ 689620

el 559 4809

548 556

[illegible]

Using a tagged transcription as the input source of glyph labels for the

Processor 140 is also connected for accessing program memory 110 and data memory 114 to obtain data stored therein. Processor 140 of machine 100 operates by accessing program memory 110 to retrieve instructions, which it then executes. Program memory 110 includes the underlying system software and firmware 112 that provide the operating system and operating facilities of machine 100, and template training routine 200 that implements the invention described in the flowchart of FIG. 11 and in the flowcharts that reference those routines, including template construction subroutine 270. Depending on the particular implementation of template training routine 200, program memory

[illegible]



Brief Summary Text - BSTX (58):

One implementation of this second training technique that uses a tag transcription also represents the formal line image source model and the text line tag transcription as finite state transition networks. The steps in this implementation are similar to the one previously described for the first training technique: merging the two networks, decoding the text line image source of glyph samples, and obtaining labeled glyph image origin positions from the best path through the merged network. This labeled glyph image origin position data is then used as input to the novel template construction process described previously. The finite state network that represents the text line tag transcription models the text line tag transcription as a series of transcription nodes and a sequence of transitions between pairs of the transcription nodes. Each transition has a transcription label associated with it, and one transition has the tag associated with it. A sequence of transitions, called a transcription path, through the tag transcription network indicates the ordered arrangement of the transcription labels in the text line tag transcription. The transcription image network produced from merging the two networks indicates modified mapping data mapping a respective one of the transcription labels included in the tag transcription to a respective glyph sample and to a respectively paired glyph label indicating the character in the glyph sample character set. Transcription labels associated with transitions in the tag transcription network become message strings associated with transitions in the transcription image network, and in particular, the tag associated with the transition in the tag transcription network becomes a message string associated with a transition included in the transcription image network such that the transcription image network models the relationship between the tag and at least one glyph occurring in the text line image of glyph samples.

Drawing Description Text - DRTX (40):

FIGS. 46, 47, 48, and 49 schematically illustrate the merging of the finite state transition network of FIG. 43 with the tag transcription network of FIG. 45, according to the illustrated implementation of the present invention; and

5,594,809

Jan. 14, 1997

State of the Art
Document: 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 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Detailed Description Text - DETX (15):

Once the residual image 26 has been calculated, it should be associated in some fashion with the storage space digital image 24. This can involve storing the residual image 26 in a memory buffer that is associated with a second memory buffer used to store the storage space digital image 24. Alternatively, many applications will store the image data in a digital file 28 on some sort of digital storage media such as a magnetic disk, an optical disk, or a PCMCIA card using a digital file storage step 27. In this case, the storage space digital image 24 and the residual image 26 can be stored in two different files, or can be stored in the same digital image file. In many cases, the file format used to store the storage space digital image 24 may support the use of private image tags. For example, the file formats TIFF, EXIF and FlashPIX all support tags of this sort. These tags are sometimes referred to as meta-data. In cases where file formats of this type are used, it will be convenient to store the residual image data in the form of a residual image tag. In this way, applications that do not know how to make use of the residual image tag will simply ignore it, and will therefore have access only to the storage space digital image 24. Whereas applications that know how to

United States Patent
McCarthy et al.

Patent No. US 6,382,311 B1
Date of Patent: Aug. 28, 2001

(54) USING A RESIDUAL IMAGE TO
REPRESENT AN EXTENDED COLOR
GAMUT DIGITAL IMAGE

1,862,311 11/2001 McCarthy et al.
6,382,311 8/2001 McCarthy et al.

(57) Inventors: Ann L. McCarthy, Richard E. Spaulding, Ryanne E. Eberhart, J. Christopher Roderick, et al. (US)

09/327,777 12/1999 McCarthy et al.
01/002,022 11/2000 McCarthy et al.
00/001,074 12/2000 McCarthy et al.

(57) Assignee: Samsung Electronics Company, Ltd. (US)

OTHER PUBLICATIONS
Lindley, Craig A. "JPEG-2000 Image Compression, part 1: Overview" in: "JPEG-2000 Image Compression, part 1: Overview", Dr. Dobb's Journal, v. 24, no. 9, pp. 35-56, Jul. 1999.

(*) Status: This document is published in the name of the inventor as described in the patent application of the inventor.

English Language Translation of Class 1 of Japanese Patent Application No. 9-212,777 (McCarthy et al. et al., of Dec. 1, 1997, as translated by the Japanese Patent Office, page 1).

(31) Appl. No.: 09/327,777

McCarthy, Richard E. "Tag of Chromatic Coordinates with Color", 2000 United States Patent Application No. 09/327,777 (McCarthy et al. et al., of Dec. 1, 1997, as translated by the Japanese Patent Office, page 1).

(32) Filed: Sep. 28, 1999

(33) Field of Invention: This invention relates to the field of image processing, and more particularly to the field of image compression and storage.

(34) Int. Cl. G06F 03/00
(35) U.S. Cl. 382/240, 382/241, 382/242, 382/243, 382/244, 382/245, 382/246, 382/247, 382/248, 382/249, 382/250, 382/251, 382/252, 382/253, 382/254, 382/255, 382/256, 382/257, 382/258, 382/259, 382/260, 382/261, 382/262, 382/263, 382/264, 382/265, 382/266, 382/267, 382/268, 382/269, 382/270, 382/271, 382/272, 382/273, 382/274, 382/275, 382/276, 382/277, 382/278, 382/279, 382/280, 382/281, 382/282, 382/283, 382/284, 382/285, 382/286, 382/287, 382/288, 382/289, 382/290, 382/291, 382/292, 382/293, 382/294, 382/295, 382/296, 382/297, 382/298, 382/299, 382/300, 382/301, 382/302, 382/303, 382/304, 382/305, 382/306, 382/307, 382/308, 382/309, 382/310, 382/311, 382/312, 382/313, 382/314, 382/315, 382/316, 382/317, 382/318, 382/319, 382/320, 382/321, 382/322, 382/323, 382/324, 382/325, 382/326, 382/327, 382/328, 382/329, 382/330, 382/331, 382/332, 382/333, 382/334, 382/335, 382/336, 382/337, 382/338, 382/339, 382/340, 382/341, 382/342, 382/343, 382/344, 382/345, 382/346, 382/347, 382/348, 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whereas applications that know how to use the residual image tag will be able to make use of it to reconstruct the extended color gamut digital image. Some file formats place a limit on the size of tags, so compression of the residual image is important for these applications.

Detailed Description Text - DETX (19):

FIG. 4 shows an example of reconstructing an extended color gamut digital image from the limited color gamut digital image and the residual image. The input to this process is an extended color gamut digital file 40 containing a limited color gamut digital image and a residual image created as described above. An extract data from digital file step 41 is used to extract the limited color gamut digital image 42 and the residual image 43. A reconstruct extended color gamut digital image step 44 is then used to form a reconstructed extended color gamut digital image 45 by combining the limited color gamut digital image 42 and the residual image 43. Typically the reconstruct extended color gamut digital image step 44 will involve combining the limited color gamut digital image 42 and the residual image 43.



(a) United States Patent
McCarthy et al.

(b) Patent No.: US 6,282,311 B1
(c) Date of Patent: Aug. 28, 2001

(d) USING A RESIDUAL IMAGE TO
REPRESENT AN EXTENDED COLOR
GAMUT DIGITAL IMAGE

1,640,531 1,615,807 Reed et al.

1,640,530 1,600,100 Reed et al.

FOREIGN PATENT DOCUMENTS

(e) Inventors: Ann L. McCarthy, Richard Kevin R.
Spaulding, Raymond Edward J.
Gleason, Richard C. of NY (US)

09-07779 02-099 (JP)
01-30242 01-000 (JP)
00-01274 01-000 (JP)

(f) Assignee: Barnes Kodak Company, Rochester,
NY (US)

OTHER PUBLICATIONS

(*) Citation: Subject is very similar; the size of the
image is smaller or slightly larger than
U.S. C. 1949, by 0.25%.

Leahy, Craig A., "1993-1994 Image Compression, part 1:
Huffman's Color Library for 1993-1994 Image Compression",
Dr. Dobb's Journal, v. 20, n. 5, pp. 50-64, Jul. 1993.
English Language Translation of Claim 1 of Japanese
Patent Application No. 9-742777 (Kodaira Kodaira et
al., of Dec. 4, 1997, as translated by the Japanese Patent
Office, page 1.
Kodaira, Michael, "Use of Adaptive Programming with
Color", US Patent Application, as translated by Dr. Dobb's
Journal, English Edition on CD-ROM, "Image Before We
Begin", attached as p. 1.

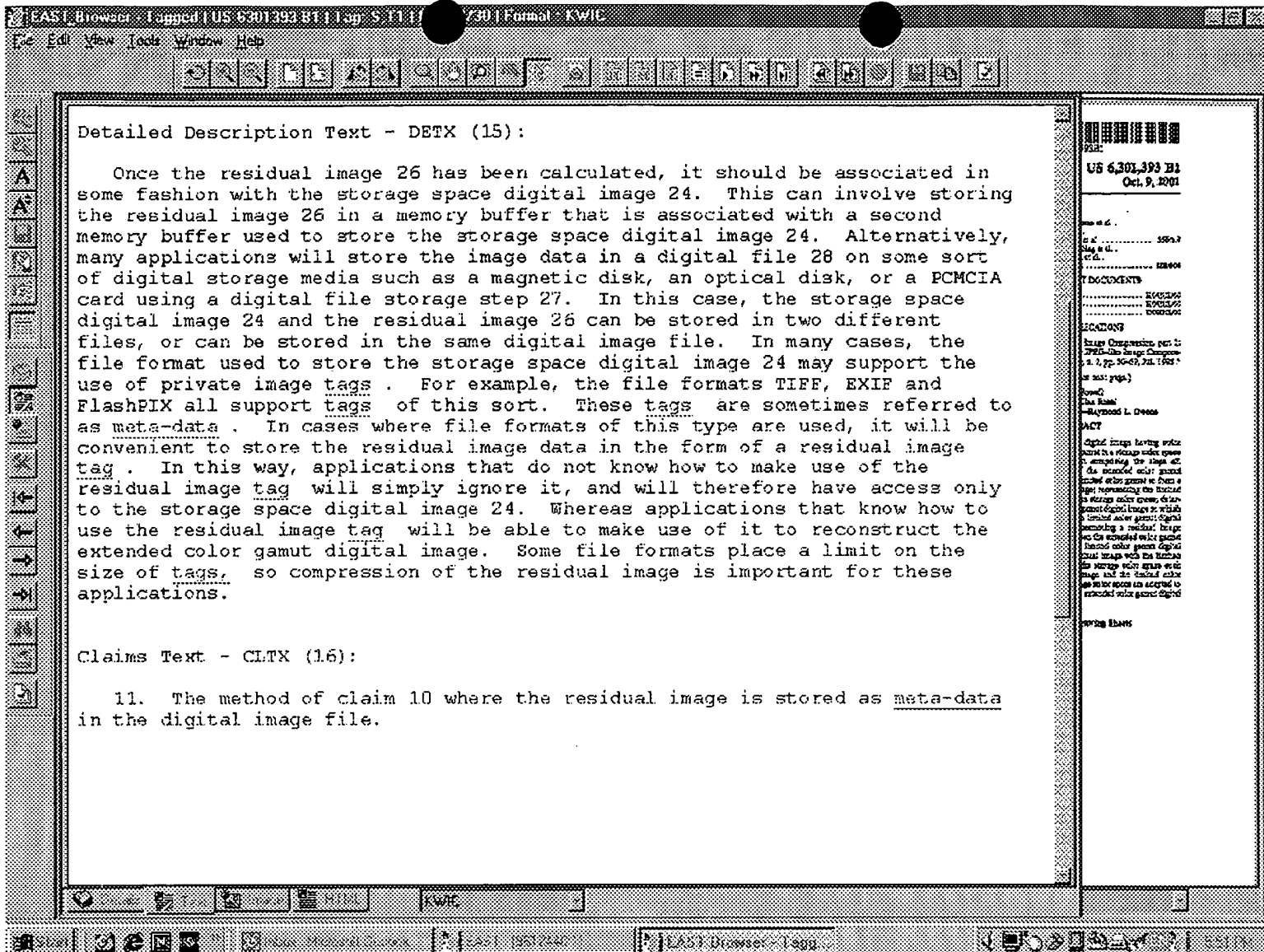
(*) Appl. No.: 09/063,024

(*) Filed: Sep. 28, 1999

(*) Int. Cl. G06K 1/00, G06K 1/02, G06K 1/04

(*) U.S. Cl. 358/240, 358/242

(*) Field of Search: 358/240, 358/242, 358/244, 358/246, 358/248, 358/250, 358/252, 358/254, 358/256, 358/258, 358/260, 358/262, 358/264, 358/266, 358/268, 358/270, 358/272, 358/274, 358/276, 358/278, 358/280, 358/282, 358/284, 358/286, 358/288, 358/290, 358/292, 358/294, 358/296, 358/298, 358/300, 358/302, 358/304, 358/306, 358/308, 358/310, 358/312, 358/314, 358/316, 358/318, 358/320, 358/322, 358/324, 358/326, 358/328, 358/330, 358/332, 358/334, 358/336, 358/338, 358/340, 358/342, 358/344, 358/346, 358/348, 358/350, 358/352, 358/354, 358/356, 358/358, 358/360, 358/362, 358/364, 358/366, 358/368, 358/370, 358/372, 358/374, 358/376, 358/378, 358/380, 358/382, 358/384, 358/386, 358/388, 358/390, 358/392, 358/394, 358/396, 358/398, 358/400, 358/402, 358/404, 358/406, 358/408, 358/410, 358/412, 358/414, 358/416, 358/418, 358/420, 358/422, 358/424, 358/426, 358/428, 358/430, 358/432, 358/434, 358/436, 358/438, 358/440, 358/442, 358/444, 358/446, 358/448, 358/450, 358/452, 358/454, 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Detailed Description Text - DETX (15):

Once the residual image 26 has been calculated, it should be associated in some fashion with the storage space digital image 24. This can involve storing the residual image 26 in a memory buffer that is associated with a second memory buffer used to store the storage space digital image 24. Alternatively, many applications will store the image data in a digital file 28 on some sort of digital storage media such as a magnetic disk, an optical disk, or a PCMCIA card using a digital file storage step 27. In this case, the storage space digital image 24 and the residual image 26 can be stored in two different files, or can be stored in the same digital image file. In many cases, the file format used to store the storage space digital image 24 may support the use of private image tags. For example, the file formats TIFF, EXIF and FlashPIX all support tags of this sort. These tags are sometimes referred to as meta-data. In cases where file formats of this type are used, it will be convenient to store the residual image data in the form of a residual image tag. In this way, applications that do not know how to make use of the residual image tag will simply ignore it, and will therefore have access only to the storage space digital image 24. Whereas applications that know how to use the residual image tag will be able to make use of it to reconstruct the extended color gamut digital image. Some file formats place a limit on the size of tags, so compression of the residual image is important for these applications.

Claims Text - CLTX (16):

11. The method of claim 10 where the residual image is stored as meta-data in the digital image file.

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Oct. 9, 2001

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FIGS. 3(A) and (B) illustrate in more detail the operation of the advisory servers 20 and the clients 25 running a Web Browser that includes an advisory mode according to the present invention. Specifically, at step 205 a client 25 generates and sends a content request to a content server 6 for information contained in knowledge base 7. In step 210, the client 25 may inhibit loading of content data associated with the content request at least until the characterization data is received from an active advisory server 20 and acted upon. In step 215, an advisory request for characterization data associated with the content request is generated to each active advisory server 20 concurrent with the aforementioned content request. As mentioned previously the characterization data may indicate that loading of the requested content data should be inhibited by the client 25. In step 220, the advisory request is generated to each active advisory server 20. In step 225, each active advisory server 20 receives and decodes the advisory request transmitted from the client 25. In step 230 each active advisory server 20 retrieves from its knowledge base 22 any stored characterization data associated with the advisory request. A more detailed description of the method and system utilized by the advisory server 20 to identify and store connections between tags identifying content (such as URLs) and associated meta-data (such as numeric rating codes or strings) may be found in Dockter et. al., U.S. patent application Ser. No. 08/267,022, entitled "Facility for the Storage and Management of Connections (Connection Server), filed Jun. 21, 1994, herein incorporated by reference in its entirety.

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 Patent: Jan. 6, 1992

Keywords: Information Systems; 100-107, 1994.
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Daryl Lewis
Joe-William Curtis, Whittens &
son, Pa.

AMTILAC

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Vol. 20 Number 2





Detailed Description Text - DETX (84):

In a variation of the digital signature application just described, an iconic image may be used to carry identifying information about one or more attributes of the text document image--referred to as "meta-data"--that is not derived from or dependent on the content of the image and is thus not a digital signature per se. This information may be encrypted using the private key of the sender or document originator--who presumably is the only source of the private key. This encrypted information may then be encoded in the iconic image. In addition, the iconic image may be produced using a very faithful reproduction and encoding technique such that the iconic image clearly and distinctly shows the appearance of the document image it represents. The iconic image in this embodiment serves as what might be called a "weak" authentication of the original text image: if the iconic image visually appears substantially similar to the original document and the decoded data from the iconic image is successfully able to be decrypted using the public key, it can be reliably determined that the sending authority in possession of the private key sent the document image carrying the iconic image, even if the content of the image cannot be authenticated. Verification of the sending authority alone will be sufficient in some applications to authenticate the document, and thus the operation of producing the photo-signature may be eliminated.



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 Patent: Jun. 9, 1998

U.S. Patent & Trademark Office
 Patent Office
 Patent Office

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Section 80. Abstract



TITLE: Method and apparatus for generating a user interface
from the entity/attribute/relationship model of a
database

----- KWIC -----

Detailed Description Text - DETX (35):

Meta data file 214 includes code implementing the data model of the invention, using the meta data model described hereafter in connection with FIGS. 11-16. Record edit interface 220, while preparing to display at terminal 219 an entity selected from user custom table 217 or applications entity list 216 by start from selection list 210, reads meta data model 216 to determine which relationships exist for that entity, and the attributes for that entity, as will be described hereafter in connection with FIGS. 11-16. Once read from meta data model 216, record edit interface 220 populates display 219 with the information required for a particular entity, such as employee panel 122 (FIG. 1) from data provided by an entry in table 102 (FIG. 1) or employee table 374 (FIG. 7).

Number 6,035,300
Patent Mar. 7, 2000

217 Database of the invention 20444
218 Database of the invention 20445
219 User interface 20446
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